

(June 1969)



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

MANUAL TRANSMITTAL SHEET

Release  
3-78

2/2/84

Subject

3160-1 - APPLICATION FOR PERMIT TO DRILL AND SUBSEQUENT OPERATIONS

- 1 Explanation of Material Transmitted: This release updates R41-CDM 643.1 (formerly USGS Conservation Division Manual 643.1, incorporated into the BLM Manual system because of the merger, via Instruction Memorandum #83-649) and converts it to the BLM Manual system for the Oil and Gas Operations Program.

The numbering system for this Manual Section, 3160-1, and subsequent Sections, to be numbered 3160-2, -3, -4, etc., is an identification of the order of publication. This numbering system has been adopted as an interim numbering system pending final reorganization of material into the Code of Federal Regulations and the Paperwork Management System.

Onshore Oil and Gas Order No. 1, Approval of Operations on Onshore Federal and Indian Oil and Gas Leases (published with corrections as Circular No. 2538), is to be used closely in conjunction with this Manual Section and Handbook. Ensure that a copy of Circular No. 2538 is readily available for reference.

2. Reports Required: None
3. Material Superseded: The pages to be removed are listed under "REMOVE" below. Also superseded is item R41-CDM 643.1 of Enclosure 1 to Instruction Memorandum #83-649.
4. Filing Instructions: File as directed below.

REMOVE:

None

INSERT:

All of 3160-1

(Total 15 sheets)

Deputy Director, Energy and Mineral Resources

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## 3160-1 - APPLICATION FOR PERMIT TO DRILL AND SUBSEQUENT OPERATIONS

.01 Purpose. This Manual Section provides guidelines and procedures for processing Applications for Permit to Drill (APD's), oil and gas tests, and subsequent operations under an onshore Federal or Indian oil and gas lease.

.02 Objectives. The objectives of this program are to ensure that those operations that are approved conform with current available technology and practice; result in diligent development and efficient resource recovery; afford adequate safeguards for the environment; result in proper reclamation of disturbed land; assure that underground sources of fresh water and other minerals will not be endangered by any operation; and otherwise assure the protection of public health and safety.

### Authority.

- A. 43 CFR Group 3100.
- B. 25 CFR 211, 212, 213, and 227.
- C. Onshore Oil and Gas Order No. 1, Approval of Operations on Onshore Federal and Indian Oil and Gas Leases. (See Federal Register, Vol. 48, No. 205, Oct. 21, 1983.)
- D. National Environmental Policy Act of 1969 (83 Stat. 852, 42 U.S.C. 4321 et seq.) and 40 CFR 1500, Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act.

### Responsibility.

- A. State Director. The State Director provides guidance to the District, ensures uniform implementation of policy and procedures, and makes environmental impact statement (EIS) determinations. In some States, the State Director retains the responsibilities of the District Manager.
- B. District Manager. The District Manager (DM) reviews and processes Applications for Permit to Drill and subsequent operations and approves categorical exclusion reviews (CER's) or environmental assessments (EA's).
- C. Area Managers. As delegated, the Area Manager is responsible for reviewing and approving APD's and subsequent operations and for approving CER's or EA's.



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.05 References.

A. Authorized Officer/Responsible Official. The authorized officer/responsible official, an employee of BLM, is authorized to perform the duties described herein.

B. Surface Management Agency (SMA). The SMA, a Federal agency other than BLM, has jurisdiction over certain public land and is responsible for protecting and managing the surface resources and uses of the land that has been leased for oil and gas development under the supervision of the authorized officer.

C. Onshore Oil and Gas Order No. 1, Approval of Operations on Onshore Federal and Indian Oil and Gas Leases. (See Federal Register, Vol. 48, No. 205, Oct. 21, 1983.)

D. Surface Operating Standards for Oil and Gas Exploration and Development Handbook, Second Edition, August 1978, or as subsequently revised.

E. Endangered Species Act

F. National Historic Preservation Act.

G. Executive Order 11593.

H. 36 CFR 800.

I. Executive Order 11988.

J. Executive Order 11990.

K. Fish and Wildlife Coordination Act.

06 Policy.

A. Lessees and Operators. Lessees and operators must not begin any drilling operation or associated construction activities on a lease without prior approval from the authorized officer of the BLM. All drilling and most subsequent operations must be conducted in accordance with an approved application.

B. All Employees. All employees involved in processing APD's or subsequent operational activities must be familiar with Onshore Oil and Gas Order No. 1. This Order supplements the regulations and outlines the responsibilities of lessees and operators. It provides two procedural options and time frames for filing and processing APD's. Under one option, the process is initiated by the filing of a Notice of Staking (NOS); the other option is initiated by the filing of a complete APD. Order No. 1 also describes BLM policy where the surface is privately owned.

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.1 Processing an Application for Permit to Drill. The official responsible for the processing of an APD usually must operate within a time frame of 30 days. (See Illustration 1 for a flow chart showing the process for the NOS option; see Illustration 2 for a flow chart showing the process for the APD option.) The charts also show how BLM interacts with any other involved Federal surface management agencies (SMA's). To conduct meaningful inspections, administrative reviews, technical reviews, and environmental reviews within the 30-day time frame, the responsible official should assemble a team of specialists who will be available to perform specific tasks as they are needed. The processing of applications will be given a high priority, and individual applications will be processed according to the date the application is received by the appropriate BLM office. A higher priority, such as an imminent lease expiration date, will be duly considered, but no special consideration will be given simply because a late filing is made.

.11 Notice of Staking. Except for lands administered by the Department of Defense, where significant surface disturbance is likely to occur, or where unusually sensitive environmental areas are involved, surveying and staking generally may be done without prior approval from BLM or the appropriate SMA. However, the lessee or operator is responsible for making access arrangements with a private surface owner, or the Bureau of Indian Affairs (BIA) and Indian tribe or Indian allottee(s), prior to entry upon these lands for surveying and staking. The applicant may perform surveying and staking for site and access first and then file an NOS with both BLM and any other involved SMA or vice versa. (See Attachment A to Order No. 1.)

A. Uses of the NOS. The NOS procedures identify potential problem areas and concerns of the responsible agency(s) early so that they can be addressed by the applicant in the APD submitted later. The NOS also helps identify needed rights-of-way and special use permits. It should result in a more acceptable APD.

B. BLM Response. Information required for the NOS is described in Section III.B of Order No. 1. The form and related instructions are included in Order No. 1 as Attachment A. Upon receipt of the NOS, the responsible official must have the informational material reviewed and be prepared to discuss any surface use and reclamation stipulations or any other concerns at the time of the predrilling inspection.

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.12 Predrilling Inspection.

A. Onsite Inspection. Within 15 days of receiving an NOS under the NOS option, or an APD under the APD option, an onsite inspection is to be conducted. Onsite inspections usually are required for all exploratory wells. Onsite inspections of proposed development or in-fill well locations are not required if an earlier and appropriate environmental assessment has been completed for the field that includes the location in question.

B. Participants. Participants at the inspection usually include representatives of the appropriate BLM office, the operator, and other interested parties, such as any other involved SMA and the operator's principal dirt contractor and, if known, drilling contractor. When appropriate, the operator's surveyor and archeologist should attend. When privately owned surface is involved, BLM must invite the private surface owner. This invitation also serves as a prior notification to the surface owner that a party will enter the owner's land for an onsite inspection on the specified date. However, it must be remembered that negotiation of agreements will be left strictly to the operator and the private surface owner.

C. Benefits of Inspection. The inspection enables selection of the most feasible site and access road from environmental, geological, and engineering points of view. Surface use and reclamation stipulations are developed during the onsite inspection and provided to the operator either at the location or within 5 working days from the date of the onsite inspection.

.13 A Complete Application. The APD must be filed regardless of whether an NOS was filed. If the NOS option is followed, the lessee/operator must submit a complete APD within 45 days of the onsite inspection; otherwise, the NOS will be returned to the lessee/operator to repeat the entire process.

A. Contents of the Application. A complete application consists of three identical copies of the package containing the following:

1. Form 3160-3. This form contains a summary of engineering and other technical information pertinent to the proposed operations. Section III.G.3 of Order No. 1 provides guidance for submittal of the required information. The form must be completed in full and signed by the responsible lessee/operator. (See Illustration 3.)

2. Drilling Plan. A complete drilling plan describes the drilling program and surface use program, in sufficient detail to enable a complete appraisal of the technical adequacy of and environmental effects associated with the proposed drilling. Guidelines for preparing a drilling program (8 points) and surface use program (13 points) can be found in Section III.G.4 of Order No. 1.

3. Bond Coverage. Evidence of bond coverage must be provided.

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4. Operator. The operator of the proposed action must be identified.

5. Miscellaneous Information. Additional information may be required by the authorized officer in order to comply with pertinent orders and notices, including a cultural resources report (if required and not already filed).

B. Review of the Application. Upon receipt of an application, a review for its completeness must be conducted. An application that contains all the elements stated above is considered administratively and technically complete. Within 7 working days of receipt of the application, the authorized officer must advise the applicant whether the application is complete as submitted or request additional information, correction, or clarification by mailing Attachment B of Order No. 1, Checklist for Applicant Notification. However, an oral notification will suffice, if the application is complete as submitted.

1. Correcting Deficiencies or Omissions. If the authorized officer checks items 2 and 3 of the notification, any time used by the applicant to correct deficiencies or to prepare and submit information initially omitted from the application should not be counted as part of the 30-day period. If the authorized officer checks items 2 and 4 of the notification, the application should be processed up to the point where any missing information or uncorrected deficiency renders further processing impractical or impossible. If the requested materials are not submitted by the applicant within 45 days of the notification, the application should be returned to the applicant.

2. Review by Specialists. During the completeness check, the authorized officer should have other specialists review the adequacy/acceptability of the application from administrative, technical (engineering and geological), and environmental aspects. This assures the thoroughness of the completeness check. The criteria/standards set forth in this Manual Section and Handbook, and in the Surface Operating Standards for Oil and Gas Exploration and Development Handbook, Second Edition, August 1978, or as subsequently revised, generally must be used in evaluating the adequacy of the proposed drilling and surface use program.

.14 Administrative Requirements. The following items must be considered to determine if an application is acceptable.

A. Lease Still in Effect. Review the lease file to assure that the lease is still in effect.

B. Expiration Date. Check the lease expiration date to determine if the proposed drilling operations would serve to extend the lease in accordance with 43 CFR 3107.2. Such applications should be handled as expeditiously as possible.

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C. Operator's Authorization and Bond. Check the application against lease records to determine if:

1. The operator is authorized to conduct operations on the leasehold.

2. Bond coverage is adequate. In accordance with 43 CFR 3104, bonds furnished must be no less than \$10,000 for lease or operator bonds or at least \$25,000 for statewide bonds. In lieu of operator's bonds or statewide bonds, a nationwide bond of at least \$150,000 may be furnished.

D. Proposed Location. Determine if the proposed location conforms with 43 CFR 3162.5-2. Geological, engineering, topographic, or environmental conditions may warrant exceptions. If any information available to the authorized officer (such as State spacing orders or the location of other wells within the field, as depicted on field maps) indicates that there may be departure from existing State spacing orders, the authorized officer must advise the operator that it is the operator's responsibility to resolve any conflicts affecting State spacing orders.

E. Unusual Conditions. Determine if other unusual conditions exist that warrant special review (e.g., if it is a unit well, does location conform with unit plan of development; is the well within or adjacent to a gas storage area; will communitization be necessary; etc.).

.15 Technical Considerations. The following technical factors must be considered during the review of the application. More detailed guidance on the technical review is provided in the Handbook.

A. Casing. The proposed casing program must be adequate to protect all fresh water zones, potentially productive zones, lost circulation zones, anomalous pressure zones, and any other mineral deposits. The casing program should be adequate to maintain hole integrity in shallow, unconsolidated sediments or plastic formations; provide a competent anchor for blowout prevention equipment until the next string of casing is set or a wellhead is installed; and protect all zones by isolation from one another, as necessary. Casing programs are checked to ensure that the proposed weight and grade have sufficient strength to avoid collapse, burst, or tension failure.

B. Cement. Proposed cement volumes, type of cement, additives, and anticipated fillup are checked to ensure that sufficient cement of the correct type will be used to protect all potentially productive zones, fresh water zones, zones containing other minerals, or other zones known to require protection. In areas subject to surface mining, consideration may be given to casing and cementing oil and gas wells drilled through coal or other valuable mineral deposits so the well's casing could, if necessary, be plugged below mining depth and cut off. After mining is completed, the well may be reentered and put back into production.

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C. Blowout Preventers. The well control system must be checked to assure that its design is adequate for the conditions likely to be encountered.

D. Drilling Fluid. The mud program should be adequate to contain expected pressures without causing formation breakdown and lost circulation. Its chemical composition in contact with fresh water zones must be nontoxic.

E. Safety and Public Health Hazards. The applications must address all potential safety and public health hazards and plans for their mitigation. Prevention measures and operating practices are to be provided for controlling the effects of the toxicity, flammability, and corrosive characteristics of a potential H<sub>2</sub>S encounter. Additional guidance on the handling of the H<sub>2</sub>S problems can be found in a separate Manual Section.

F. Completion Program. The completion program for a development well should be included as part of the application. For an exploratory well, the operator may submit a proposed completion program as part of the application or later on Form 3160-5 after a discovery has been made.

G. Hole Deviation. Unless otherwise approved by the authorized officer, all wells must be drilled substantially vertically. A directional survey is required, if a well deviates more than 10 degrees from the vertical or if it could result in a bottom location less than 200 feet from the spacing unit or lease boundary.

.16 Environmental Considerations. Oil and gas activities are divided into actions under categorical exclusion subject to a categorical exclusion review, actions normally requiring environmental assessments, and actions normally requiring environmental impact statements. Individual actions for the first and the third categories are described in Appendix 5 to 516 DM 6, which further implements the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA) of 1969, as amended. The proposed drilling of the first confirmation well following discovery by an exploratory well falls under the second category. Environmental reviews should be conducted in accordance with current Departmental Manual and BLM NEPA guidance. More detailed guidance on environmental reviews is provided in the Handbook.

A. CER and EA. For actions requiring a CER, the environmental effects of the actions are checked against the nine CER criteria. If any of the nine criteria are met, the action represents an exception to categorical exclusion and requires preparation of an EA. An EA is a concise public document that briefly provides sufficient evidence and analysis for determining whether the impacts are "significant" and, therefore, requires preparation of an EIS, or not significant, hence concludes with a finding of no significant impact.

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B. Environmental Requirements of Other Government Agencies. The environmental review process is a mechanism for complying with NEPA and other Federal environmental laws and regulations. BLM approvals of the APD and subsequent operations do not relieve the lessee and operator from obtaining any other authorizations required for operations on Federal and Indian leases. For example, if the proposed action involves a discharge to navigable waters, a National Pollutant Discharge Elimination System (NPDES) permit must be obtained or, if the proposed well is to be completed for injection purposes (disposal or production enhancement), an underground injection permit must be obtained from the Environmental Protection Agency or the appropriate State agency. Section I of Order No. 1 holds lessees and operators accountable for conforming their operations with Federal laws and regulations and with State and local laws and regulations to the extent that such State and local laws are applicable to operations on Federal or Indian leases.

C. Consultation with Other Agencies. Both the Endangered Species Act (ESA) of 1973, as amended, and the National Historic Preservation Act (NHPA) of 1966, as amended, require a consultation process with other designated agencies under a specified situation and could, on a case-by-case basis, delay processing the proposed APD or subsequent operations. The ESA requires that formal consultation be conducted with the U.S. Fish and Wildlife Service (FWS) on actions that "may affect" a listed species or its critical habitat. Once the formal consultation is initiated, final action on the proposed action must await the conclusion of the consultation process, i.e., after the FWS issues a "biological opinion" on the proposed action at the end of the consultation. The NHPA and Executive Order 11593 (1971) require Federal agencies to consider the effect of each proposed undertaking on any site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places. Regulations developed by the Advisory Council on Historic Preservation (ACHP) (36 CFR 800), which implement Sections 106 and 110 of the NHPA, require consultation with the appropriate State Historic Preservation Officer and the ACHP, as necessary, to determine the extent and intensity of survey, the significance of identified cultural properties, and the development of measures designed to mitigate adverse effects on such properties. The operator/lessee must be informed of any potential delays in APD approval pending the Federal agency's completion of its Section 106 responsibilities. For proposed activities on lands under the jurisdiction of other surface management agencies (SMA's), the appropriate SMA is responsible for consultations required by the ESA and the NHPA. However, if requested by the SMA or if the SMA fails to initiate a required consultation process, BLM may take the lead in conducting such consultations.

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.17 Approval of Drilling Operations. Applications should be processed as promptly as possible. After review of the complete application for its technical adequacy and environmental acceptability, the application may be approved, if it is administratively and technically complete. If the application is considered inadequate, the authorized officer may require modification or amendment or set such conditions of approval as are necessary for safe drilling and adequate protection of natural resources and reclamation of the areas that are to be disturbed by the proposed operations. Within 30 days of receipt of the APD under the APD option, or within 10 days if the applicant chooses the NOS option, the authorized officer must approve the application as submitted or with appropriate modification or stipulations; return the application and advise the lessee or operator of the reasons for disapproval; or advise the lessee or operator, either in writing or orally with subsequent written confirmation, of the reason why final action has been delayed and the date such final action is expected. BLM approval of proposed drilling operations will not be delayed, pending the knowledge that related permits and authorizations from other Federal, State, or local agencies have been obtained.

A. Conditions of Approval. Conditions of approval should be for handling of the specific, nonrecurring problems associated with the proposed action. They must be kept to a minimum, must be reasonable, necessary, clear, concise, and enforceable, and must not reiterate items that are adequately covered in the application or lease. Any modification made to the proposed layout of the drill site must be based on environmental or safety reasons. Similarly, no modification may be made to the actual layout unless for pertinent environmental and safety concerns. A list of the more prevalent conditions(s) of approval, which may be used as appropriate, is shown in Illustration 4.

B. Delays in Approval. If it is not possible for the authorized officer to take action prior to the Federal oil and gas lease expiration date, the operator must be advised at least orally prior to such date, with any such notification confirmed in writing. This advice must include the reasons for the delay and the operator's right to file for a suspension. If the operator is not the lessee of record or owns only a portion of the record title, the lessee(s) or other lessee(s) must also execute any application for a suspension, or such parties must submit separate applications therefor. For unitized or communitized leases, the unit or communitization agreement operator can submit the suspension application on behalf of the owners of the committed leases. All suspension requests must be received prior to the lease expiration date(s), in order to be considered. Suspensions for Indian oil and gas leases may be granted, only if the Bureau of Indian Affairs and the involved tribe or allottee(s) concur.



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C. SMA Recommendations. The authorized officer must not approve any drilling operations under conditions that are contrary to the recommendations of any involved SMA without further consultation. If a permit for an associated road or other permit is required from the SMA in support of the proposed operation, the application must not be approved until the authorized officer is advised that the permit has been, or will be, issued by the appropriate SMA. To clarify the understanding between BLM and the SMA, the SMA should furnish a memorandum or cover sheet, containing a statement similar to the following, with its written notification submitting its recommendations and stipulations to the authorized officer: "The application is acceptable provided the enclosed conditions are included in the approval." A copy of the approved application, minus any proprietary information, is furnished to the SMA for its files.

## 3160-1 - APPLICATION FOR PERMIT TO DRILL AND SUBSEQUENT OPERATIONS

.2 Subsequent Operations. Criteria to determine whether subsequent operations activities require prior approval are listed below:

Activities Requiring Prior Approval

Redrilling, deepening, performing casing repairs, plugging back, altering casing, performing nonroutine fracturing jobs, recompleting in a different interval, performing water shutoff, and converting to injection or disposal.

Any subsequent new construction, reconstruction, or alteration of existing facilities including, but not limited to, roads, emergency pits, firewalls, or other production facilities on any lease when additional surface disturbance will result.

Activities Requiring no Prior Approval

Routine fracturing or acidizing jobs or recompletion in the same interval, provided no additional surface disturbance is involved and the operations conform to the standards of prudent operating practices.

Well cleanout work, routine well maintenance (such as pump rods and tubing work), or for repair, replacement, or modification of surface production equipment, provided no additional surface disturbance is involved.

Emergency repair, provided the authorized officer is promptly notified.

With some minor modification, Illustration 2 may be used as a guide for the filing and processing of subsequent operations. Certain activities that are part of the subsequent operations may not require onsite inspections or geological evaluation and/or environmental review, but the general procedures are the same. The Application for Permit to Drill, or Sundry Notices (Illustrations 3 and 5), as appropriate, should be filed by the lessee or operator with the authorized officer to obtain approval before further well operations involving change in the original plan are conducted.

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.3 Other Requirements and Guidance..31 Actions Required of the Lessee or Operator.

A. Reports. The lessee or operator must furnish two copies of Form 3160-4, Well Completion or Recompletion Report and Log (Illustration 6), to the authorized officer within 30 days after well completion.

B. Notification of New or Resumed Production. The lessee or operator must notify the authorized officer of the date on which production has begun or resumed no later than 5 business days after any well begins production anywhere on a lease site, or allocated to a lease site, or resumes production, in the case of a well that has been off production for more than 90 days. When such reports are received from industry, the Minerals Management Service must be advised the same day by not less than first class mail.

C. Notification of Other Activities. Subsequent reports of operations are required of the lessee or operator for the following activities:

1. Form 3160-5. Form 3160-5, submitted within 30 days of completion of redrilling, deepening, performing casing repairs, plugging back, altering casing, performing nonroutine fracturing jobs, recompletion in a different interval, performing water shutoff, routine fracturing jobs, acidizing jobs, and recompletion in the same interval.

2. Form 3160-4. Form 3160-4, submitted within 30 days of completion or recompletion in a different interval.

D. Well Abandonment. No well abandonment operation may be commenced without prior approval of the authorized officer. Requirements for filing an application are provided in Section V of Order No. 1. The lessee or operator must file with the authorized officer a subsequent report of abandonment on Form 3160-5, within 30 days following completion of the well abandonment.

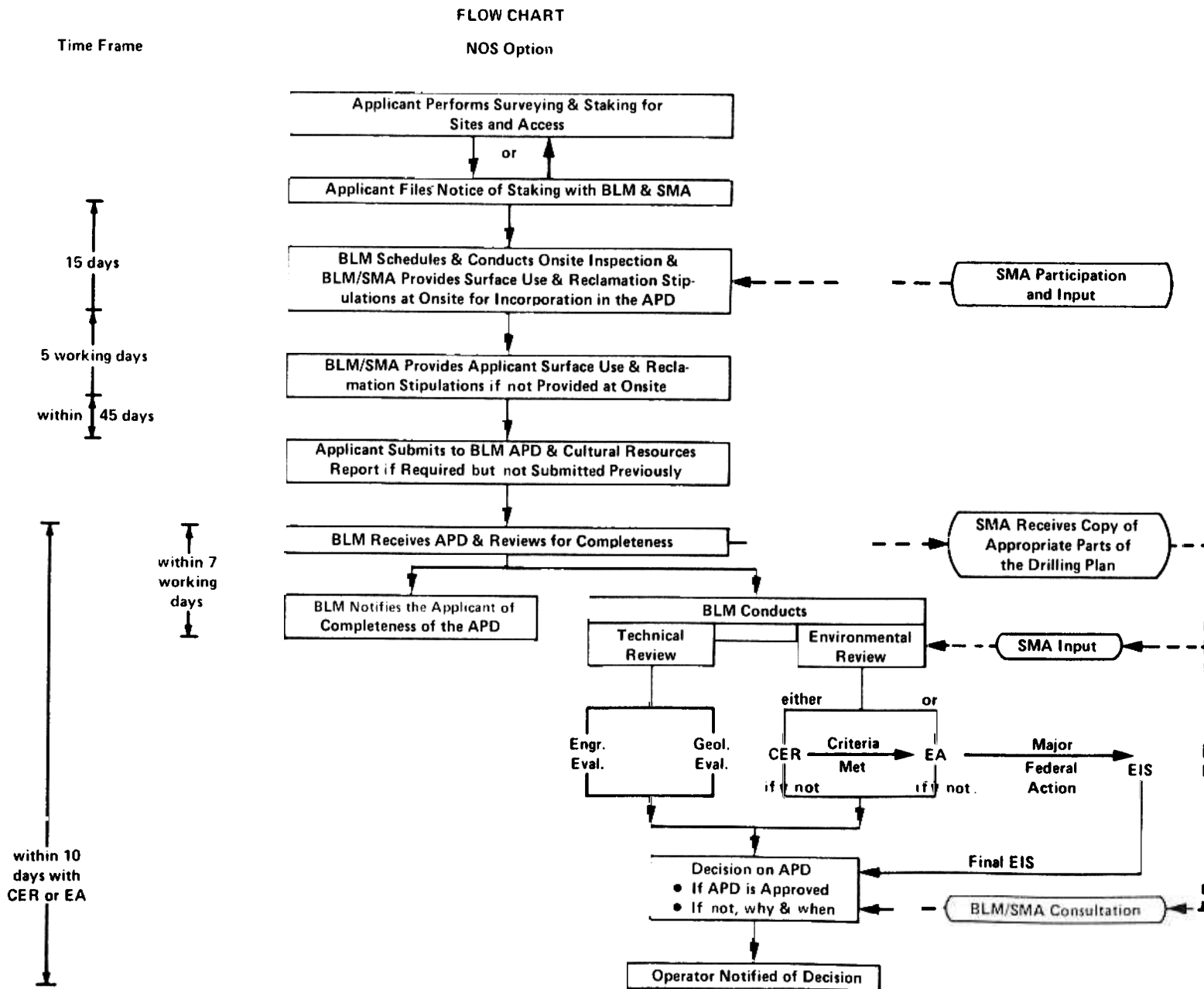
E. Notification of Inspection. The lessee or operator, upon completion of reclamation operations, should notify the authorized officer on Form 3160-5 that the location is ready for inspection.

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.32 Private Surface. Where all or part of the surface is privately owned or is held in trust for Indian benefit, the applicant is responsible for obtaining an agreement with the surface owner for the reclamation of disturbed areas and/or payment of damages in lieu thereof. If the authorized officer or involved SMA determines that the adjacent Federal or Indian surface could be significantly affected, the authorized officer may request a copy of the agreement for review and, if necessary, may prescribe measures to protect the adjacent Federal or Indian surface. It should be emphasized that the test of whether it is appropriate to require the submittal of the agreement between the operator and the surface owner is not distance (i.e., nearby, adjacent, proximity, or contiguous) but, rather, a determination by the authorized officer that Federal or Indian owned surface will be significantly affected. An on-the-ground cultural resource inventory on privately owned surface may be undertaken only with the consent of the private surface owner. If the private surface owner refuses entry for that purpose, the lessee or operator must be instructed to conduct its approved operations in a manner that avoids adverse effects on any properties that are listed, or may be eligible for listing, in the National Register of Historic Places.

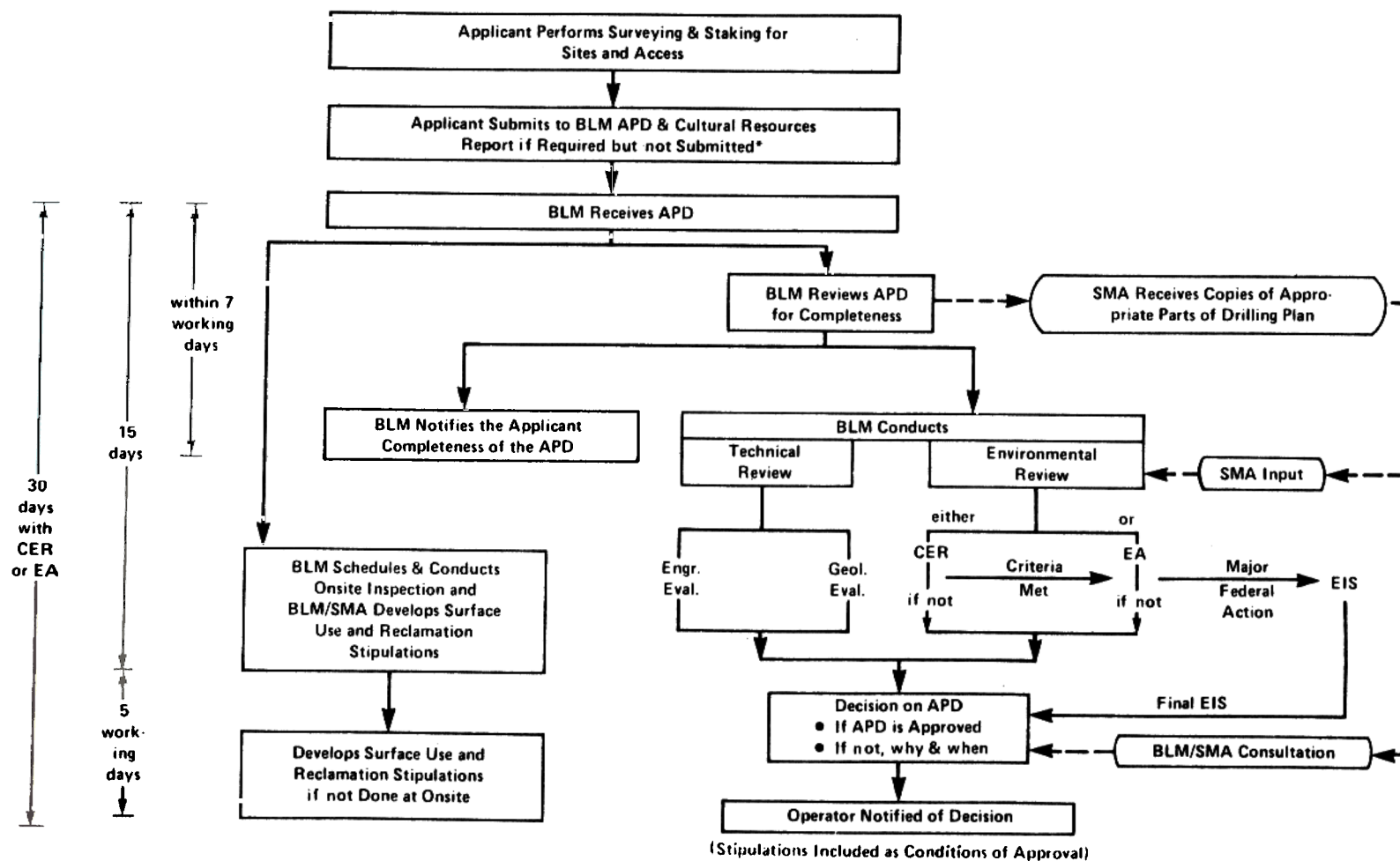
.33 Lands Under Jurisdiction of Other SMA's. Of the many SMA's other than BLM, such as Forest Service, Bureau of Indian Affairs, Fish and Wildlife Service, National Park Service, Bureau of Reclamation, and Department of Defense, the FS and the BIA are the two with which BLM most frequently must consult in the processing of operational proposals. Approval of operations on the lands under the SMA's jurisdiction must consider any cooperative agreement established with the SMA. The contact points with the SMA during the processing of a proposed action are shown in Illustrations 1 and 2. The general working relationship with the other SMA should be as close as possible to that depicted by each illustration.

.34 Release of Information. Guidelines and procedures for determining whether a record is proprietary and for releasing or withholding such records are contained in 43 CFR 3162.8. Generally, all data, plans, and applications concerning a drilling operation are available for inspection under the Freedom of Information Act, as amended, except geological/geophysical and reservoir information, trade secrets, financial data and interpretation of such data, and maps and related files for which a lessee/operator requests proprietary status.



FLOW CHART  
APD Option

Time Frame



The Cultural Resources Report may be submitted not later than the 25th day of the 30-day processing period.

3160-1 - APPLICATION FOR PERMIT TO DRILL AND SUBSEQUENT OPERATIONS

Application for Permit to Drill, Deepen, or Plug Back

Form 3160-3  
(November 1983)  
(formerly 9-331C)

SUBMIT IN TRIPPLICATE\*  
(Other instructions on  
reverse side)

Form approved.  
Budget Bureau No. 1004-0136  
Expires August 31, 1985

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK <b>DRILL</b> <input checked="" type="checkbox"/> <b>DEEPEN</b> <input type="checkbox"/> <b>PLUG BACK</b> <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. F- 78763		
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>			6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A		
2. NAME OF OPERATOR US Oil Company			7. UNIT AGREEMENT NAME N/A		
3. ADDRESS OF OPERATOR 18th & C St. Federal City, CD 00001			8. FARM OR LEASE NAME Federal		
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)* At surface 458' FNL & 546' FEL At proposed prod. zone same			9. WELL NO. #1-6		
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 1 Mile N-E of Federal City, CD			10. FIELD AND POOL, OR WILDCAT Unnamed		
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any): 458' N			11. SEC., T., R., M., OR BLE. AND SURVEY OR AREA SEC. 10 T50N R50W		
16. NO. OF ACRES IN LEASE 160			12. COUNTY OR PARISH 13. STATE Federal City CD		
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. N/A			17. NO. OF ACRES ASSIGNED TO THIS WELL 40		
19. PROPOSED DEPTH 10,000			20. ROTARY OR CABLE TOOLS Rotary		
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 30 GR - 40 KB			22. APPROX. DATE WORK WILL START* 1 month after approval		

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
13-3/4	9-3/8 OD	36# K-55 STL	1,000	To surface
8-3/4	5 1/2 OD	17# N-80 LTC	9,000	Through pays 15% excess

- Log B.O.P. checks in daily drill reports and drill 8-3/4" hole to 9,000.
- Run tests if warranted and run 5 1/2" casing if productive.
- Run logs as needed, and perforate and stimulate as needed.

EXHIBITS ATTACHED:

- "A" Location & Elevation Plat
- "B" The Ten-Point Compliance Program
- "C" The Blowout Preventer Diagram
- "D" The Multi-Point Requirements for A.P.D.
- "E & "E" Access Road Maps to Location
- "F" Radius Map of Field
- "G" Drill Rig Layout, Cut-Fill Cross-Section & Production Facilities
- "H" Drill Rig Layout
- "I" Rehabilitation Plan

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED Edging King TITLE Owner DATE 1-1-84  
(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

3160-1 - APPLICATION FOR PERMIT TO DRILL AND SUBSEQUENT OPERATIONS

Application for Permit to Drill, Deepen, or Plug Back

INSTRUCTIONS

**GENERAL:** This form is designed for submitting proposals to perform certain well operations, as indicated, on all types of lands and leases for appropriate action by either a Federal or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

**ITEM 1:** If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable State or Federal regulations concerning subsequent work proposals or reports on the well.

**ITEM 4:** If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

**ITEM 14:** Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on this reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal or State agency offices.

**ITEMS 15 AND 18:** If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective production zone.

**ITEM 22:** Consult applicable Federal or State regulations, or appropriate officials, concerning approval of the proposal before operations are started.

NOTICE

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR Part 3160.

**PRINCIPAL PURPOSE:** The information is to be used to process and evaluate your application for permit to drill, deepen, or plug back an oil or gas well.

**ROUTINE USES:** (1) The analysis of the applicant's proposal to discover and extract the Federal or Indian resources encountered. (2) The review of procedures and equipment and the projected impact on the land involved. (3) The evaluation of the effects of proposed operation on surface and subsurface water and other environmental impacts. (4)(5) Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions, as well as routine regulatory responsibility.

**EFFECT OF NOT PROVIDING INFORMATION:** Filing of this application and disclosure of the information is mandatory only if the lessee elects to initiate drilling operation on an oil and gas lease.

The Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq) requires us to inform you that:

This information is being collected to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases.

This information will be used to analyze and approve applications.

Response to this request is mandatory only if the lessee elects to initiate drilling operations on an oil and gas lease.



3160-1 - APPLICATION FOR PERMIT TO DRILL AND SUBSEQUENT OPERATIONS

SUGGESTED CONDITIONS OF APPROVAL  
(To be Used as Appropriate)

Bureau of Land Management	Lessee name or name of operator, lease serial number (or communitization or unit agreement identification) and name of lessor if on Indian land, and number and surveyed description of the well.
Telephone Numbers	
Office	
District Manager	Above data required on well sign
Assistant District Manager- Minerals	Surface Management Agency Contact
	<hr/>
	Phone:                      (Office)                      (Home)

CONDITIONS FOR DRILLING APPROVAL

1. (Daily) (Weekly) REPORT: Submit a (daily)(weekly) progress report until completed.
2. WELL SIGN: All drilling wells must have a well sign in legible condition from spud date to final abandonment. Information required is shown in the block in the upper right-hand corner of this page.
3. PLUGGING, SUSPENSION, OR PLAN CHANGE: Do not plug, plug back, suspend operations or change approved plan without prior BLM approval. Phone if urgent (see phone numbers above), followed immediately by written request on Form 3160-5.
4. REQUIRED DATA: Within 30 days after completion, submit two copies of Well Log (Form 3160-4), drill stem test data, core description and analysis, electric logs, directional survey, or any other data compiled during drilling of the well.
5. BLOWOUT PREVENTER: Blowout preventer and control valves must be installed prior to drilling below surface casing. The equipment should be pressure tested before drill-out and should be tested for mechanical proficiency at least once daily, and the information included in the daily drilling report.
6. SURFACE LOCATION APPROVAL: You are required to contact \_\_\_\_\_, prior to commencing construction or major reconstruction of any road to the location site. You may not appropriate sand, stone, gravel, caliche, or related minerals that are in Federal or Indian ownership for lease use without authorization from \_\_\_\_\_.

3160-1 - APPLICATION FOR PERMIT TO DRILL AND SUBSEQUENT OPERATIONS

7. IMMEDIATE REPORT: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported in accordance with the requirements of NTL-3A or its revision.
8. EVALUATION OF SHOWS: All showings of oil and gas must be evaluated and, if commercial, must be depleted before abandonment. Any show not completed must be isolated behind pipe in any producing well, or isolated with cement plugs in abandoning the hole. All other minerals penetrated should be reported to BLM and must be isolated in the same manner as oil and gas shows.
9. DRILLING DEADLINE: This approval is good for 90 days. Operations shall not be commenced after \_\_\_\_\_, unless prior approval of the (authorized officer) BLM is obtained.

DRILLING PITS: If the well is suspended or abandoned, all pits will be fenced until they have been backfilled.

11. NOTIFICATION OF AUTHORIZED OFFICER: Notify the (authorized officer) BLM sufficiently in advance so he may approve and witness plugging, plugging back, formation tests, water shutoff tests, and running and cementing casing, other than conductor string. Phone if urgent, followed immediately with written request on Form 3160-5.
12. REMOVAL OF EQUIPMENT: Do not remove drilling equipment from any abandoned or suspended well without consent of the (authorized officer) BLM.

MULTIPLE ZONE OR ALTERNATE ZONE COMPLETIONS: All multiple or alternate zone completions must be approved in advance. Applications for these approvals must be accompanied by:

- (a) Electric log of well with separate zones clearly marked; and
- (b) Diagrammatic sketch of mechanical installation proposed

SPACING AND UNORTHODOX UNIT: Approval of this well is not to be construed as approval of the unorthodox spacing unit as shown on your plat. If the well becomes productive, a communitization agreement will be necessary, if more than a single Federal or Indian lease is within the lands committed to the well.

15. PRODUCTION FACILITIES: If the well becomes a producer, approval of this office will be required before installing on or off leasehold flow lines, tank batteries, measurement, or disposal facilities.

ARCHEOLOGICAL OR HISTORICAL SITES: If any important archeological or historical sites are uncovered during this operation, shut down all operations immediately, and notify this office at once.

3160-1 - APPLICATION FOR PERMIT TO DRILL AND SUBSEQUENT OPERATIONS

17. BLOWOUT PREVENTER GUIDELINES:

After setting the \_\_\_\_\_ casing string, and before drilling into the \_\_\_\_\_ formation, the blowout preventers and related control equipment must be pressure tested to \_\_\_\_\_. Any equipment failing to test satisfactorily must be repaired or replaced. This office should be notified in sufficient time for a representative to witness the tests and shall be furnished a copy of the pressure test report.

Pipe rams and the annulus-type preventer must be actuated at least once each 24 hours and the blind rams each time the drill pipe is out of the hole.

The accumulator system must maintain a pressure capacity reserve at all times to provide for repeated operation of hydraulic preventers.

A drill string safety valve(s) in the open position must be maintained on the rig floor at all times while drilling operations are conducted. Separate valves are required when drilling with a mixed string.

Blowout prevention drills must be conducted as necessary to ensure that each drilling crew is properly trained to carry out emergency duties.

18. MUD RESERVE: Pits should contain a sufficient quantity of reserve fluids to ensure well control.

19. DRILLING OPERATING PRACTICES:

Always condition hole before making trip.

Watch fluid level in pits and in drill pipe-casing annulus; any change should be evaluated before continuing trip.

Drilling fluid should be tested for viscosity, water loss, wall cake thickness, weight, and gel strength every 8 hours.

- (d) Pressure test casing strings prior to drilling plugs each time a string is run and cemented. Test pressure must equal or exceed 0.2 psi/ft of depth or 1,000 psi, whichever is greater. A leak is indicated if pressure drop exceeds 10 percent in 30 minutes; if there is any indication of leak, corrective measures must be taken. A successful pressure test must be obtained before proceeding to the next step in the drilling program.

3160-1 - APPLICATION FOR PERMIT TO DRILL AND SUBSEQUENT OPERATIONS

- (e) Install H<sub>2</sub>S detector and alarm
- (f) Install mud degasser.
- (g) Test lines, separators, and tanks should be installed and operative before testing any potential hydrocarbon zones when fluid is expected to reach the surface.

SPUD DATE: The spud date must be reported to the (authorized officer) BLM within 48 hours, and Form 3160-6, Monthly Report of Operations, will be filed starting with the month in which operations began.

SUBSEQUENT REPORT OF ABANDONMENT: If the drilling operations result in a dry hole, Form 3160-5 is to be filed within 15 days after the well is abandoned downhole. A subsequent letter is to be filed at the time that all surface restoration work, including revegetation, has been completed and the location is considered ready for inspection.

CASING REPORTS: Reports are to be furnished for each string of casing runs and should show the dates of work; size hole drilled; size, grade, and weight of casing run; depth set; amount and kind of cement used; cement additions; cement tops behind casing and determination of them; date for each stage, if a multistage job; and method of pressure testing casing, and test results.

CASING INSPECTION: \_\_\_\_\_ casing shall be inspected to detect transverse and longitudinal defects; to determine wall thickness, pipe eccentricity, and grade uniformity; and to make a thread check of all exposed threads. Casing inspection reports must be maintained and made available to the (authorized officer) BLM upon request.

USED CASING: Notify the (authorized officer) BLM in sufficient time for a representative to inspect any used casing planned for use in a casing string.

CASING PROTECTORS: Protectors must be run on drill pipe through the \_\_\_\_\_ casing. There must be enough protectors of sufficient outside diameter to protect the casing from undue wear.

26. RIG EQUIPMENT: Rig engines must have water-cooled exhausts. All rig heating stoves must be of the explosion-proof type.

3160-1 - APPLICATION FOR PERMIT TO DRILL AND SUBSEQUENT OPERATIONS

Sundry Notices and Reports on Wells

Form 3160-5  
(November 1983)  
(Formerly 9-331)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE\*  
(Other instructions on re-  
verse side)

Form approved.  
Budget Bureau No. 1004-0135  
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.  
Use "APPLICATION FOR PERMIT-" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	5. LEASE DESIGNATION AND SERIAL NO. F-78763
2. NAME OF OPERATOR US Oil Company	6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
3. ADDRESS OF OPERATOR 18th & C St. Federal City, CD 00001	7. UNIT AGREEMENT NAME N/A
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 458' FNL & 546' FEL	8. FARM OR LEASE NAME Federal
14. PERMIT NO.	9. WELL NO. #1-6
15. ELEVATIONS (Show whether DF, ST, GR, etc.) 30 GR 40 KB	10. FIELD AND POOL, OR WILDCAT Unnamed
	11. SEC., T., R., N., OR S.E. AND SURVEY OR AREA SEC 10 T50N R50W
	12. COUNTY OR PARISH Federal City
	13. STATE CD

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANE <input checked="" type="checkbox"/>	(Other) <input type="checkbox"/>	(Other) <input type="checkbox"/>

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

- 1) Surface casing - 1300 feet.
- 2) #7-5 trash to be placed in enclosed trash pit and periodically hauled to disposal site... no burning allowed and no trash is to be buried; will use metal containers for trash and will be hauled to dump.
- 3) #10-1 Same as above - everything must be hauled to dump. The reserve pit will be pumped within one week after rig leaves. Route to and location of disposal site area are on attached map with explanation.
- 4) #4-B Production facilities will be encircled with fencing appropriate to keep children from entering. Production facilities will be painted to blend with topo. Production facilities will be landscaped with trees and shrubs which will be maintained until established. Electrically powered pumps will be used.
- 5) Production pit located in large fill. Already relocated during on-site inspection.
- 6) Berm production facilities - Berm will be put around tanks and treater.
- 7) Depending upon soil consistency, a lining may be required in the reserve pit.

18. I hereby certify that the foregoing is true and correct

SIGNED C. Doyle TITLE Operator DATE 1/31/84

(This space for Federal or State office use)

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY: \_\_\_\_\_

\*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

### Instructions

**General:** This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

**Item 4:** If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

**Item 17:** Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs, amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

### PRIVACY ACT

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 30 U.S.C. 181 et. seq., 351 et. seq., 25 U.S.C. et. seq.; 43 CFR 3160.

**PRINCIPAL PURPOSE:** The information is to be used to evaluate, when appropriate, approve applications, and report completion of secondary well operations, on a Federal or Indian lease.

**ROUTINE USES:** (1) Evaluate the equipment and procedures used during the proposed or completed subsequent well operations. (2) Request and grant approval to perform those actions covered by 43 CFR 3162.3-2(2). (3) Analyze future applications to drill or modify operations in light of data obtained and methods used. (4)(5) Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions.

**EFFECT OF NOT PROVIDING INFORMATION:** Filing of this notice and report and disclosure of the information is mandatory once an oil or gas well is drilled.

The Paperwork Reduction Act of 1980 (44 U.S.C. 3501, et. seq.) requires us to inform you that:

This information is being collected in order to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

This information will be used to report subsequent operations once work is completed and when requested, to obtain approval for subsequent operations not previously authorized.

Response to this request is mandatory for the specific types of activities specified in 43 CFR Part 3160.



3160-1 - APPLICATION FOR PERMIT TO DRILL AND SUBSEQUENT OPERATIONS

Well Completion or Recompletion Report and Log

Form 3160-4  
(November 1983)  
(formerly 9-330)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE\*  
(See other instructions on reverse side)

Form approved.  
Budget Bureau No. 1004-0137  
Expires August 31, 1985

WELL COMPLETION OR RECOMPLETION REPORT AND LOG\*

1a. TYPE OF WELL:		OIL WELL <input checked="" type="checkbox"/>	GAS WELL <input type="checkbox"/>	DRY <input type="checkbox"/>	Other _____
b. TYPE OF COMPLETION:		NEW WELL <input checked="" type="checkbox"/>	WORK OVER <input type="checkbox"/>	REPERF. <input type="checkbox"/>	PLUG BACK <input type="checkbox"/>
		DIFF. REPERF. <input type="checkbox"/>	Other _____		
2. NAME OF OPERATOR US Oil Company					
3. ADDRESS OF OPERATOR 18th & C St. Federal City, CD 00001					
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 458' FNL 546' FEL At top prod. interval reported below Same At total depth same					
14. PERMIT NO.		DATE ISSUED			
One		4/10/84			
15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, RNB, RT, GR, ETC.)*	19. ELEV. CASING HEAD	
1/1/84	1/5/84	1/8/84	30 GR - 40 KB	30 ft.	
20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS CABLE TOOLS	
10,000 TVD	N/A	Two	Rotary		
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*				25. WAS DIRECTIONAL SURVEY MADE	
8,500 to 8,550 MD Sandy River				yes	
9,000 to 9,100 MD Muddy Creek					
26. TYPE ELECTRIC AND OTHER LOGS RUN				27. WAS WELL CORDED	
Induction Log SP Log Directional Log Neutron Density Log				no	
28. CASING RECORD (Report all strings set in well)					
CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT FULLED
9-3/8 OD	36# K-55 STC	1,300	13-3/4	to surface	N/A
5 1/2" OD	17# N-40 LTC	9,000	8-3/4	surface to 9,000	N/A
29. LINER RECORD					
SIZE	TOP (MD)	BOTTOM (MD)	BACKS CEMENT*	SCREEN (MD)	
4 1/2" OD	8,900	9,900	20		
30. TUBING RECORD					
SIZE	DEPTH SET (MD)	PACKER SET (MD)			
2 EUE		8480			
2 EUE		8980			
31. PERFORATION RECORD (Interval, size and number)					
8,500 to 8,550 5/8 4/ft.					
9,000 to 9,050 5/8 4/ft.					
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.					
DEPTH INTERVAL (MD)		AMOUNT AND KIND OF MATERIAL USED			
8500 - 8550		Acid 500 Gal. 5% HCL 107.H <sub>2</sub> SO <sub>4</sub>			
9000 - 9100		" " " "			
8500 - 8550		1,000 lb. Sand 500 BBL Fluid			
9000 - 9100		" " " "			
33. PRODUCTION					
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)			WELL STATUS (Producing or shut-in)
1/15/84		Flowing			Producing
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL	GAS—MCF
1/15/84	12 HR	1 1/2"	8 BBL	5 BBL	
FLOW, TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL	GAS—MCF	WATER—BBL
1,000	500	8 BBL	10 BBL	40 API	
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)					TEST WITNESSED BY
					I.N. SPECTOR
35. LIST OF ATTACHMENTS					
Test Record					
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records					
SIGNED		TITLE		DATE	
J. M. Lunn		Production Engineer		7-1-84	

\*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

3160-1 - APPLICATION FOR PERMIT TO DRILL AND SUBSEQUENT OPERATIONS  
Well Completion or Action Report and Log

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):				38. GEOLOGIC MARKERS		
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
St. Mary's	1750 ft.	1999 ft.	Sandy, good porosity, fresh water	Quaternary		
Calvert	4000 ft.	6999 ft.	Salt water interface with Gettysburg shale	Tertiary	500 ft.	457 ft.
Gettysburg Sand	8500 ft.	8550 ft.	Oil zone low flowrate, fast pressure buildup on 24-hour test	St. Mary's	1750 ft.	1500 ft.
Lockatong	9000 ft.	9100 ft.	Oil zone low flowrate, fast pressure buildup on 24-hour test	Choptank	2000 ft.	1850 ft.
				Calvert	4000 ft.	3700 ft.
				Gettysburg	7000 ft.	6800 ft.
				Lockatong	9000 ft.	8700 ft.
				Newark Group	9990 ft.	9500 ft.



3160-1 - APPLICATION FOR PERMIT TO DRILL AND SUBSEQUENT OPERATIONS

Well Completion or Recompletion Report and Log

INSTRUCTIONS

**GENERAL:** This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

**ITEM 4:** If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

**ITEM 18:** Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

**ITEMS 22 and 24:** If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

**ITEM 29: "Sacks Cement:"** Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

**ITEM 33:** Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

PRIVACY ACT

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

**AUTHORITY:** 30 U.S.C. 181 et. seq., 351 et. seq., 25 U.S.C. et. seq.; 43 CFR 3160

**PRINCIPAL PURPOSE:** The information is to be used to evaluate the actual operations performed in the drilling of an oil or gas well on a Federal or Indian lease.

**ROUTINE USES:** (1) Evaluate the equipment and procedures used during the drilling of the well. (2) The review of geologic zones and formation encountered during drilling. (3) Analyze future applications to drill in light of data obtained and methods used. (4)(5) Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions.

**EFFECT OF NOT PROVIDING INFORMATION:** Filing of this report and disclosure of the information is mandatory once an oil or gas well is drilled.

The Paperwork Reduction Act of 1980 (44 U.S.C. 3501, et. seq.) requires us to inform you that:

This information is being collected to allow evaluation of the technical, safety, and environmental factors involved with drilling and producing oil and gas on Federal and Indian oil and gas leases.

This information will be used to analyze operations and compare equipment and procedures actually used with the proposals applied for.

Response to this request is mandatory once an oil or gas well is drilled.